

INTERNATIONAL SEARCH REPORT

Inter. Appl. No.
PCT/GB2004/003057

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N5/10 C12P7/64 A01H5/00 A01H5/10 C12N9/10
C12N15/82 A23L1/29

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, Sequence Search, WPI Data, EMBASE, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | WO 02/08401 A (ABBOTT LAB) 31 January 2002 (2002-01-31) | 1 |
| Y | abstract; figure 42; example xv page 46, line 9 | 9-22 |
| Y | WO 02/090493 A (ABBOTT LAB) 14 November 2002 (2002-11-14) claims 1-31; figure 16; sequence 36 | 9,10 |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

26 January 2005

Date of mailing of the international search report

18.04.05

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Inter of Application No
PCT/GB2004/003057

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| Y | <p>TONON T ET AL: "Long chain polyunsaturated fatty acid production and partitioning to triacylglycerols in four microalgae" PHYTOCHEMISTRY, PERGAMON PRESS, GB, vol. 61, no. 1, September 2002 (2002-09), pages 15-24, XP004374192 ISSN: 0031-9422 abstract page 16, left-hand column, paragraph 2 - right-hand column, paragraph 1 page 22, right-hand column, line 4 - page 23, left-hand column, line 3</p> | 9-22 |
| P,X | <p>WO 03/078639 A (TONON THIERRY ; UNIV YORK (GB); GRAHAM IAN ALEXANDER (GB)) 25 September 2003 (2003-09-25) claims 1-35; figure 3d</p> | 1-22 |
| A | <p>DATABASE EMBL 'Online! 23 September 1998 (1998-09-23), "GH11554.5prime GH Drosophila melanogaster head pOT2 Drosophila melanogaster cDNA clone GH11554 5 similar to Baldspot: FBan0003971 G0: 'plasma membrane (G0:0005886)! located on: 3L 73B1-73B1;; 08/12/2002, mRNA sequence." XP002312674 retrieved from EBI accession no. EM_PRO:AI134173 Database accession no. AI134173 cited in the Example xv of W002/08401 the whole document</p> | |
| A | <p>ABBADI A ET AL: "Transgenic oilseeds as sustainable source of nutritionally relevant C20 and C22 polyunsaturated fatty acids?" EUROPEAN JOURNAL OF LIPID SCIENCE AND TECHNOLOGY, WILEY VCH VERLAG, WEINHEIM, DE, vol. 103, no. 2, February 2001 (2001-02), pages 106-113, XP002228744 ISSN: 1438-7697 the whole document</p> | |

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2004/003057

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| T | <p>JGI: "Thalassiosira pseudonana; Advanced search, Search terms : elongase; EL01" 'Online! XP002312673 Retrieved from the Internet: URL: http://genome.jgi-psf.org:8080/annotation/servlet/jgi.annotation.Annotation?pStateVar=Search&pProteinId=0&pStart=0&pEnd=&pRandom=88548&pDbList=%2Cthaps1&pASearch=elongase&pSearchType=model&pSig=evalue&pNumeric=1.0e-20&pDb=thaps1&pPerPage=25&pSearchRadio=reg 'retrieved on 2005-01-10! the whole document</p> <p>-----</p> | |
| T | <p>JGI: "Thalassiosira pseudonana; Advanced search, Search terms : elongase; EL02" 'Online! XP002314938 Retrieved from the Internet: URL: http://genome.jgi-psf.org:8080/annotation/servlet/jgi.annotation.Annotation?pStateVar=Search&pProteinId=0&pStart=0&pEnd=&pRandom=88548&pDbList=%2Cthaps1&pASearch=elongase&pSearchType=model&pSig=evalue&pNumeric=1.0e-20&pDb=thaps1&pPerPage=25&pSearchRadio=reg 'retrieved on 2005-01-10! the whole document</p> <p>-----</p> | |
| T | <p>JGI: "Thalassiosira pseudonana; Advanced search, Search terms : elongase; EL03" 'Online! XP002314939 Retrieved from the Internet: URL: http://genome.jgi-psf.org:8080/annotation/servlet/jgi.annotation.Annotation?pStateVar=Search&pProteinId=0&pStart=0&pEnd=&pRandom=88548&pDbList=%2Cthaps1&pASearch=elongase&pSearchType=model&pSig=evalue&pNumeric=1.0e-20&pDb=thaps1&pPerPage=25&pSearchRadio=reg 'retrieved on 2005-01-10! the whole document</p> <p>-----</p> | |

INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-22 (all partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1a combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 3a, and the subject-matter related to said cells.

2. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1a combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 4a, and the subject-matter related to said cells.

3. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1a combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 5a, and the subject-matter related to said cells.

4. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1a combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 6a, and the subject-matter related to said cells.

5. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1b combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 3a, and the subject-matter related to said cells.

6. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1b combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 4a, and the subject-matter related to said cells.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1b combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 5a, and the subject-matter related to said cells.

8. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1b combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 6a, and the subject-matter related to said cells.

9. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1c combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 3a, and the subject-matter related to said cells.

10. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1c combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 4a, and the subject-matter related to said cells.

11. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1c combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 5a, and the subject-matter related to said cells.

12. claims: 1-22 (all partially)

Cells comprising a nucleic acid molecule comprising a nucleic acid sequence related to the DNA sequence represented in Figure 1c combined with at least a nucleic acid molecule related to the DNA sequence as represented in Figure 6a, and the subject-matter related to said cells.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2004/003057

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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| | | | AU 7798201 A | 05-02-2002 |
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| | | | EP 1487985 A2 | 22-12-2004 |
| | | | WO 03078639 A2 | 25-09-2003 |